

CLAIMS

The following listing of claims replaces all prior versions:

1. (Previously presented) A device comprising:
a sub-mount wafer portion having opposing first and second surfaces, the sub-mount wafer portion containing conductive traces exposed at a the first surface of the sub-mount wafer portion;
a cap wafer portion attached to the sub-mount wafer portion to form a package, the cap wafer portion having opposing first and second surfaces, the first surface of the cap wafer portion being bonded to the first surface of the sub-mount wafer portion;
a die mounted on the first surface of the sub-mount wafer portion and containing an edge-emitting laser that is electrically coupled to the conductive traces, the cap wafer portion having a cavity formed therein at the first surface of the cap wafer portion, the die disposed in the cavity; and
a reflector defined by reflective surfaces of walls of the cavity, the reflector positioned to reflect an optical signal from the edge-emitting laser through a in a reflected direction toward the first surface of the sub-mount wafer portion and through the sub-mount wafer portion, wherein the optical signal emerges in the reflected direction from the second surface of the sub-mount wafer portion.
2. (Currently amended) The device of claim 1, further comprising an alignment post attached to the sub-mount wafer portion where the optical signal emerges from the sub-mount wafer portion.
3. (Original) The device of claim 1, further comprising a lens in the path of the optical signal.
4. (Currently amended) The device of claim 3, wherein the lens is integrated in the sub-mount wafer portion along the path of the optical signal.
5. (Original) The device of claim 3, wherein the lens comprises a diffractive optical element.

6. (Cancelled)
7. (Currently amended) The device of claim 6 1, wherein the cap wafer portion attaches to the sub-mount wafer portion to hermetically seal the die in the cavity.
8. (Cancelled)
9. (Cancelled)
10. (Currently amended) A process comprising:
mounting a die containing a laser on a first surface of a sub-mount wafer portion;
electrically connecting the laser to electrical traces on a first surface of in the sub-mount wafer portion; and
attaching a cap wafer portion to the sub-mount wafer portion to form a packaged optical device by bonding a first surface of the cap wafer portion to the first surface of the sub-mount wafer portion, the cap wafer portion having a cavity formed therein at the first surface of the cap wafer portion, the cap wafer portion having a reflector defined by reflective surfaces of walls of the cavity, the reflector oriented to the sub-mount in a position such that an optical signal from the laser is reflected in a reflected direction toward the first surface of the sub-mount wafer portion and through the sub-mount wafer portion, wherein the optical signal emerges in the reflected direction from a second surface of the sub-mount wafer portion opposing the first surface of the sub-mount wafer portion.
11. (Currently amended) The process of claim 10, further comprising attaching an alignment post to the sub-mount wafer portion where the optical signal emerges.
12. (Cancelled)
13. (Cancelled)
14. (Original) The process of claim 10, wherein the laser is an edge-emitting laser.

15. (Original) The process of claim 10, wherein electrically connecting the laser comprises connecting a plurality of lasers to a the sub-mount wafer that includes the sub-mount portion.

16. (Currently amended) The process of claim 15, further comprising, after attaching the cap wafer portion to the sub-mount wafer portion to form a package, cutting the package sub-mount wafer to separate the sub-mount wafer portion from similar sub-mounts sub-mount wafer portions and separate the cap wafer portion from similar cap wafer portions.

17. (Canceled)

18. (Canceled)

19. (Currently amended) The device of claim 48 1, further comprising an alignment post attached to a the second surface of the sub-mount wafer portion where the optical signal emerges from the sub-mount wafer portion.

20. (Currently amended) The device of claim 1, wherein the first surface of the sub-mount wafer portion is substantially planar.